

GEO Health Community of Practice (CoP)
Telecon: Focus on COVID-19 Transmission
December 1, 2020

In Attendance: 31 participants

Juli Trtanj (NOAA), Helena Chapman (NASA HQ/BAH), John Balbus (NIEHS), Trisha Castranio (NIEHS), Janet Whaley (NOAA Fisheries/Aquaculture), Steven Rekant (USDA APHIS One Health), David Green (NASA), Cynthia Hall (NASA Earth Science Data Systems), Sean McCartney (NASA Goddard/SSAI), Dorian Janney (NASA Goddard/GPM mission), Helen Amos (NASA Goddard/SSAI), Anna Borovikov (NASA Goddard/GMAO), Assaf Anyamba (NASA Goddard), Pawan Gupta (USRA/NASA Marshall), Leo Goldsmith (USGCRP), Bob Chen (CIESIN/Columbia U.; NASA SEDAC), Shannon Vattikuti (Mississippi State U.), Mike Gremillion (U. of Alabama Water Institute), Ben Zaitchik (Johns Hopkins U.), Josh Colston (U. of Virginia), Thilanka Munasinghe (Rensselaer Polytechnic Institute), Piyushimita (Vonu) Thakuriah (Rutgers U.), Antar Jutla (U. of Florida), Cascade Tuholske (Earth Institute/CIESIN at Columbia U.), Juan Castillo (PAHO), Andreas Skouloudis (iSteep.org), Susanna Ehlers (Inter-American Institute for Global Change Research), Adrian Guzmán (Mexican Space Agency), Didier Davignon (Environment and Climate Change Canada), Celine Audette (Environment and Climate Change Canada), Matthew Romm (Self).

Summary Notes:

**Prepared by Helena Chapman (NASA HQ/BAH)*

Juli Trtanj (NOAA) opened the telecon by welcoming all participants. She invited CoP members to provide brief updates on upcoming conferences and related activities.

Juli Trtanj (NOAA) stated that the GEO Health CoP meeting will be held in partnership with the American Geophysical Union as a side event at the American Geophysical Union Virtual Fall Meeting 2020 (December 1-17, 2020). The [meeting](#) will be held on Tuesday, December 15, 2020 from 8:30-10:30AM EST/GMT-5, and the agenda will be finalized next week. She also mentioned that the Co-Chairs have met with the [Small Work Group](#) leads, in efforts to discuss the goals, objectives, and next steps of the work stream.

Helena Chapman (NASA HQ/BAH) requested that CoP members share their AGU2020 poster and oral presentations to make a compiled list that can be disseminated on the CoP listserv. Next, she mentioned that she attended the AmeriGEO monthly telecon and shared key updates of the GEO Health CoP. Finally, she shared the recent publication of the Duke University's One Health [Monthly Newsletter](#).

Trisha Castranio (NIEHS) shared two upcoming events. First, the [E-conference on Environmental Determinants of Infectious Diseases in India: Focus on COVID-19](#) will be held from December 7-10, 2020 (daily from 7:30-10:30AM EST/GMT-5). Each day will focus on one sub-theme – Climate, Air pollution, Disasters, and Indoor environment – and include plenary lectures, expert sessions, panel discussions, and scholar presentations. Second, the [2020 Triangle Global Health Consortium Annual Conference](#) (Theme: “Global Health in the COVID-19 Era: Leadership in Action”) will be held on Thursday, December 3, 2020, with keynote, panel, poster, and networking sessions from 8AM-6PM EST/GMT-5. Notably, she said that John Balbus (NIEHS) will be moderating a session, where Aubrey Miller (NIEHS) will present on the NIH’s Disaster Research Response Program’s Role in the COVID-19 response.

Mike Gremillion (U. of Alabama Water Institute) mentioned that he will be leading the global water and security initiatives at the U. of Alabama, which will be formalized soon into public law as an Environmental Security Center for analyses on environmental security issues and potential cascading impacts related to food and health. He said that he would like to connect with CoP members, especially to discuss surveillance and analysis on environmental issues (including the food-water nexus), in efforts to produce products for national security federal agencies. Notably, he stated that the National Academies of Sciences, Engineering, and Medicine established the National Academies Climate Security Roundtable to allow stakeholders to share information with the Climate Security Advisory Council. He also mentioned that he has been included in conversations with the Biden-Harris transition team members, who are aware of the importance of environmental security and surveillance on these topics. He confirmed that the center would have an international scope. **Juli Trtanj (NOAA)** mentioned that this topic would be of interest for the Infectious Disease and Food Security and Safety Small Working Groups, especially as a way to leverage expertise among CoP members.

David Green (NASA HQ) mentioned that there is a need to continue to integrate the disaster and health communities to better share information and coordinate activities. In particular, he said that the disaster community has discussed approaches with academic and humanitarian communities (e.g. Red Cross) about how to become more proactive in preparation efforts for natural disasters (e.g. hurricane, earthquake). He suggested that by combining efforts of the disaster and health communities, they can expand the predictive capabilities and enhance “early action”, both financially and through enhanced infrastructure. **Juli Trtanj (NOAA)** asked if any CoP members were working in the disaster and health interface. **Bob Chen (CIESIN/Columbia U.; NASA SEDAC)** said that their team has connected with NASA Disasters since they are working on topics across the disaster life cycle (e.g. immediate and long-term impacts).

Bob Chen (CIESIN/Columbia U.; NASA SEDAC) mentioned that Cascade Tuholske is a current Earth Institute fellow hosted by the Earth Institute and new to the GEO Health CoP. **Cascade Tuholske (Earth Institute/CIESIN at Columbia U.)** said that his team is using fine resolution daily temperature max products to examine urban heat stress at a global level. He said that they are interested to examine the complex science that drives heat stress and links to socio-economic pathways and food security. **Juli Trtanj (NOAA)** mentioned that he may be interested to join the Food Security and Safety Small Work Group. She also stated that the Heat Urban Island Campaign had successfully occurred across 13 US cities, modified for COVID-19 requirements.

Janet Whaley (NOAA Fisheries/Aquaculture) stated that her expertise is in veterinary medicine, toxicology, and risk assessment, and her current NOAA work focuses on One Health with the National Fisheries Service and Seafood Inspection. She said that her team aims to identify specific areas related to background permits and analyses, especially with new mandates on US seafood competitiveness and economic growth over the next five years. For this reason, she hopes to make connections with CoP members about how to apply the One Health approach to human health, seafood safety, and other offshore ventures.

Helen Amos (NASA Goddard/SSAI) mentioned that [ARSET](#) has two upcoming trainings relevant for CoP members: 1) [Introduction to NASA's "Black Marble" Night Lights Data](#) on Thursday, December 3, 2020 from 9-11AM EST/GMT-5; and 2) [Hyperspectral Data for Land and Coastal Systems](#) on Tuesday, January 19, January 26, and February 2, 2021 from 11AM-12:30PM EST/GMT-5 or 4-5:30PM EST/GMT-5.

Juan Castillo (PAHO) provided an overview on the PAHO Action Plan on Air Quality and Environmental Determinants of Health. He shared the PAHO Plan of Action 2020-2030, where the goal is to reduce the burden of disease and inequity in health attributable to environmental risks in the region, and the objective is to strengthen the capacity of health actors in all sectors to address and adapt to environmental determinants of health, prioritizing those living in conditions of vulnerability. He mentioned that there are four strategic areas: 1) improve the performance of environmental public health programs; 2) strengthen environmental public health surveillance; 3) foster an air quality responsible and resilient health sector; and 4) promote environmentally healthy and resilient cities and communities on air quality. He described some priorities moving forward, using Earth observations to enhance technical cooperation in air quality topics. He mentioned that key stakeholders are country governments, global/regional platforms, sector partners, and national institutes of health. Finally, he mentioned that they would be happy to circulate the final document with the action plan for any feedback from CoP members.

Susanna Ehlers (Inter-American Institute for Global Change Research) mentioned that she serves as a science policy officer at IAI, where they have six small grant projects that have a global and interdisciplinary context. In particular, she said that one [project \(air quality map\)](#) examined the wildfire impacts of the 2019 catastrophic wildfire season in the State of Acre, Brazil, reporting that the air quality levels far exceeded the WHO air quality standards ([report in Portuguese](#)). She stated that this project aims to develop an early warning system platform for stakeholders to be able to better plan and respond to wildfires in this geographic area. She also confirmed that IAI has recognized health and climate health as priorities for the upcoming years, and that IAI currently works with Ministries of S&T and Environment in the Americas region and would like to strengthen connections with Ministries of Health. She shared that they plan to coordinate in-person workshops in Uruguay and Peru/Ecuador and to apply for small sea grants that can be linked to larger initiatives (e.g. Belmont Forum).

David Green (NASA HQ) said that our scientific approaches in monitoring air quality changes continue to improve, especially as we have considered the physical phenomenon and disease progression during the COVID-19 pandemic. In addition to satellite imagery, he suggested that environmental and health information, including vulnerability, should be linked with behavioral changes. He said that it is important to identify low- and high-risk areas as well as highlight and share effective actions and behavioral practices. He also asked about cities with increased health risks due to poor air quality and if early adopters of best effective practices can be identified and applied to communities. **Juan Castillo (PAHO)** mentioned that PAHO seeks stakeholders in the specific region (“success stories”) that can help promote change for the respective intervention.

Helen Amos (NASA Goddard/SSAI) mentioned that NASA has a [global air quality forecast](#) that may be of interest to PAHO’s efforts in the Americas region without air quality monitors. She also shared information about a collaboration between NASA and World Resources Institute ([CityAQ](#)) as a pilot city-scale operational air quality forecast. **Andreas Skouloudis (iSteep.org)** mentioned that from Europe the AutoOil programmes followed clean air strategies that provide guidance to minimize errors made by the acidification reduction programmes. **Juli Trtanj (NOAA)** mentioned that due to the new AmeriGEO focus and CoP members’ interests, they plan to schedule a follow-up telecon for CoP members to discuss potential connections in the Americas Region. She said that these discussions may help build on currently funded projects and identify gaps to seek future funding opportunities.

Juli Trtanj (NOAA) opened the dialogue for [Small Work Group](#) leads to provide updates on their activities.

Dorian Janney (NASA Goddard) mentioned that the Food Safety and Security Small Work Group aims to focus on the environmental factors that influence food production and safety. She said that they are requesting CoP members to share existing data sources used in real-time applications, identify which aspects can be improved (“wish list”) to more accurately meet data needs, and recommend strategies to expand stakeholder and other end-user communities. She encouraged CoP members to participate in these discussions as they plan to exchange regular emails and meet quarterly for approximately 45-minutes via MS Teams or WebEx platform. **Juan Castillo (PAHO)** agreed that they can extend the invitation to the PAHO Food Safety advisor. **John Balbus (NIEHS)** mentioned that NIEHS has a vested interest in food safety, mycotoxins, and climate change, and would be happy to connect NIEHS colleagues to the Small Work Group.

Andreas Skouloudis (iSteep.org) mentioned that environmental stressors (e.g. hurricanes, earthquakes) on health care facilities may have an abrupt short- or long-term demand for health care services. He requested that interested CoP members in the Health Care Infrastructure Small Work Group should complete the [Doodle Poll](#) to schedule the best available meeting time. He said the agenda will include: 1) Provide introductions; 2) Discuss the status of this small working group; 3) Review the draft presentation at the AGU; 4) Act inclusively in focusing the aims of this small group to the needs of the participants; and 5) Think how to attract more participants and eventually end-users of the “open” products. **John Balbus (NIEHS)** agreed with the proposed agenda for the Small Work Group and wondered about how planes were using scenario-based models to ensure that health care facilities manage the surge in COVID-19 cases

simultaneously with natural disasters. In particular, he stated that he will be moderating the webinar, [Dealing with Disasters Fast and Slow: Health System Resilience for COVID-19 and Climate Change](#), at the Prince Mahidol Award Conference on December 14, 2020 at 7AM EST/GMT-5, and the webinar speakers may be encouraged to join the discussion as end users. He said that the first half of the meeting will describe WHO/WMO efforts with early warning systems, and the second half of the meeting will incorporate environmental health issues related to concurrent disasters (e.g. COVID-19 and climate-related disasters).

Ben Zaitchik (Johns Hopkins U.) said that the Heat Small Work Group plans to review the work stream and leverage ongoing efforts. He suggested that the sub-categories of deliverables based on needs may be helpful for organizational efforts, especially to identify specific efforts that will require additional work. He also mentioned that they plan to review the deliverables, review the literature, identify networking opportunities, and activities that can be completed even without resources.

Juli Trtanj (NOAA) asked CoP members if it would be helpful to have Small Work Group break-out sessions at the AGU Virtual Fall Meeting 2020. **Dorian Janney (NASA Goddard/GPM mission)** and **Ben Zaitchik (Johns Hopkins U.)** agreed that break-out sessions could be helpful and offer additional opportunities for networking.

Juli Trtanj (NOAA) and **Helena Chapman (NASA HQ/BAH)** thanked CoP members for their continued contributions to the field and engagement in the group discussion. They agreed that this telecon had provided an opportunity to share information, connect researchers, and leverage resources that can amplify current activities using Earth observations for public health applications.

Juli Trtanj (NOAA) closed the telecon and mentioned that the next telecon would be scheduled for Tuesday, December 15th at 8:30AM EST (GMT-5).

Adjourned: 10:05 AM EST (GMT-5)